UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS

P O Box 1450 Alexandria, Virgima 22313-1450 www.uspto.gov

DATE MAILED: 07/21/2008

NOTICE OF ALLOWANCE AND FEE(S) DUE

7590 07/21/2008

Pillsbury Winthrop LLP Intellectual Property Group Suite 2800 725 South Figueroa Street Los Angeles, CA 90017-5406 EXAMINER
YANG, RYAN R

ART UNIT PAPER NUMBER
2608

 APPLICATION NO.
 FILING DATE
 FIRST NAMED INVENTOR
 ATTORNEY DOCKET NO.
 CONFIRMATION NO.

 10/829/012
 04/21/2004
 Yasukiro Enomoto
 03/09/396 H8156US
 5/982

 TITLE OF INVENTION: STORAGE DEVICE
 5/982

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$300	\$0	\$1740	10/21/2008

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 1SI. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and I/2 the ISSUE FFE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or Fax (571)-273-2885

INSTRUCTIONS: This appropriate. All further a indicated unless correcte maintenance fee notificat	form should be used to correspondence including d below or directed other ions.	for transmitting the I ng the Patent, advanc nerwise in Block 1, b	SSUE FEE and PUBLICA e orders and notification of y (a) specifying a new corn	TION FEE (if requi maintenance fees w espondence address;	ired). I vill be and/o	Blocks 1 through 5 s mailed to the current r (b) indicating a sepa	hould be correspon trate "FEE	completed where dence address as ADDRESS" for				
	ENCE ADDRESS (Note: Use Bi	ock I for any change of addr	Fe	Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.								
Pillsbury Winth Intellectual Propo Suite 2800	erty Group	/2008	TI	Cer	tificate	e of Mailing or Trans s) Transmittal is being ficient postage for firs ISSUE FEE address I) 273-2885, on the d	deposited	I with the United all in an envelope being facsimile ted below.				
725 South Figuer Los Angeles, CA								(Depositor's name)				
Loss i ingeres, Cri	. 50017 5100							(Signature)				
			L					(Date)				
APPLICATION NO.	FILING DATE		FIRST NAMED INVENTO	R	ATTO	RNEY DOCKET NO.	CONFIR	RMATION NO.				
10/829,012	04/21/2004		Yasuhiro Enomoto		03	09396 H8156US		5982				
TITLE OF INVENTION:	STORAGE DEVICE											
APPLN, TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUI	PREV. PAID ISSU	E FEE	TOTAL FEE(S) DUE	DATE DUE					
nonprovisional	NO	\$1440	\$300	\$0		\$1740	1	10/21/2008				
EXAM	INER	ART UNIT	CLASS-SUBCLASS	7								
YANG, R		2628	345-574000	_								
	ondence address (or Cha 1/122) attached. cation (or "Fee Address' 2 or more recent) attach	inge of Correspondence "Indication form ned. Use of a Custome	or agents OR, distributely, (2) the name of a single firm (having as a member a 2- registered attempt or agent) and the names of up to listed, no name will be printed. (3)									
PLEASE NOTE: Unle recordation as set forth (A) NAME OF ASSIC	ess an assignee is ident n in 37 CFR 3.11. Comp BNEE	ified below, no assign pletion of this form is	nee data will appear on the NOT a substitute for filing a (B) RESIDENCE: (CTI	patent. If an assign n assignment. 'Y and STATE OR C	OUNT							
4a. The following fee(s) a ☐ Issue Fee	re submitted:		4b. Payment of Fee(s): (Pl A check is enclosed Payment by credit c	ard. Form PTO-2038	is atta	sched. required fee(s), any de	ficiency, o					
	SMALL ENTITY state	as. See 37 CFR 1.27.	☐ b. Applicant is no le	onger claiming SMAI	LLEN	ΠΤΥ status. Sec 37 Cl	FR 1.27(g))(2).				
NOTE: The Issue Fee and interest as shown by the r	f Publication Fee (if requeered of the United Sta	uired) will not be acce ites Patent and Traden	epted from anyone other than ark Office.	the applicant; a regi	stered.	attorney or agent; or th	ne assigned	or other party in				
Authorized Signature				Date								
Typed or printed name				Registration N								
This collection of informa an application. Confident submitting the completed this form and/or suggestic Box 1450, Alexandria, V Alexandria, Virginia 223	ation is required by 37 C iality is governed by 35 application form to the ons for reducing this but irginia 22313-1450. DC 13-1450.	CFR 1.311. The inform U.S.C. 122 and 37 C USPTO. Time will verden, should be sent to D NOT SEND FEES C	nation is required to obtain of FR 1.14. This collection is of any depending upon the income the Chief Information Office COMPLETED FORMS	r retain a benefit by t estimated to take 12 o lividual case. Any co cer, U.S. Patent and TO THIS ADDRESS	he pub minuter omment Trader S. SEN	lic which is to file (and is to complete, including its on the amount of times ark Office, U.S. Dep D TO: Commissioner	by the Using gathering the you recartment of for Patents	SPTO to process) g, preparing, and quire to complete Commerce, P.O. s, P.O. Box 1450,				

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



Los Angeles, CA 90017-5406

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS

ss: COMMISSIONER FOR PATENTS P O Box 1450 Alexandria, Virgima 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.			
10/829,012	04/21/2004	Yasuhiro Enomoto	0309396 H8156US	5982			
7.	590 07/21/2008		EXAM	IINER			
Pillsbury Winthr	op LLP		YANG, RYAN R				
Intellectual Proper	tŷ Group		ART UNIT	PAPER NUMBER			
Suite 2800 725 South Figuero	a Street	2628 DATE MAILED: 07/21/2008					

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 731 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 731 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

Application No.	Applicant(s)	
10/829,012	ENOMOTO, YASUI	HIRO
Examiner	Art Unit	
Rvan R. Yang	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address-All claims being allowable, PROSECUTION ON THE MERTIS IS (OR REMAINS) CLOSED in this application. If not included
herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS
NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative
of the Office or upon petition by the applicant. See 37 CFR 133 and MPEP 1308.

- This communication is responsive to amendment filed 4/7/2008.
- The allowed claim(s) is/are 1,8 and 9.
- 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some* c) None of the:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____
 - Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
- 5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) 🔲 hereto or 2) 🔲 to Paper No./Mail Date _____
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

 DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1. Notice of References Cited (PTO-892)
- 2.
 Notice of Draftperson's Patent Drawing Review (PTO-948)
- Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date
- Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 5. Notice of Informal Patent Application
- Interview Summary (PTO-413), Paper No./Mail Date .
- 7. X Examiner's Amendment/Comment
- 8. X Examiner's Statement of Reasons for Allowance
- 9. Other .

Application/Control Number: 10/829,012 Page 2

Art Unit: 2628

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes
and/or additions be unacceptable to applicant, an amendment may be filed as provided
by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be
submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Roger Wise on 7/15/2008.

The application has been amended as follows:

Cancel claim 11.

2. The following is an examiner's statement of reasons for allowance:

As per claims 1 and 9, the closest prior art by Cullen et al. or Yasushi does not explicitly teach "storing the specific number of data, which are specified by the first address and the second address, lies in two or more lines of the cells, the counter increases the write address from a first write address to a second write address during execution of the write operation for writing the data into the region, the controller changes the cells, which are simultaneously placed in the write-enable state, from a first number of cells designated by the first write address within a first line to a second number of cells designated by the second write address within a second line", "a counter for supplying a write address designating a cell of the memory array subjected to a write operation," and "a multiplexer for outputting the write address supplied from the counter to the memory array when performing tile write operation and for outputting a read address to the memory array when performing a read operation", as amended

Page 3

Application/Control Number: 10/829,012

Art Unit: 2628

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on

Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ryan R. Yang whose telephone number is (571) 272-

7666. The examiner can normally be reached on M-F 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Michael Razavi can be reached on (571) 272-7664. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ryan R Yang/

Primary Examiner, Art Unit 2628

July 22, 2008

Art Unit: 2628



Application/Control No. 10/829.012

Examiner Ryan R. Yang Applicant(s)/Patent under Reexamination ENOMOTO, YASUHIRO Art Unit

Total Claims Allowed: 3

O.G.

Print Claim(s)

O.G

Print Fig.

2628

				ISSUE	CLASSIFICATION													
	ORIGINAL							INTERNATIONAL CLASSIFICATION										
CLASS SUBCLASS							C	LAIMED			NON-CLAIMED							
345 574				G	G 06 F 12 /06							1						
CROSS REFERENCES					G 09	G	5	/36				,						
CLASS		09	,						′									
345	559							- 1					1					
									1				/					
					П				1				1					
									1				1					
									1				1					

(Primary Examiner)

(Legal Instruments Examiner) (Date)							(Filling Examiner) (Date)						1						1		
		renur	nbere	d in th	e sam	e ord		resen	ted by		cant	o c	□ CPA □ T.D.								
Final	Original		Final	Original		Final	Original		Final	Original		Final	Original		Final	Original		Final	Original		
1	1]			1																
3	8	1																			
-	9	ł												1			1	_			
		[1									[
_			<u> </u>		-	_															
\vdash		1	<u> </u>			-															
		i			i			ĺ						i			İ				
]																			
		ł	<u> </u>																		
		ł	\vdash			_								1	_		l	_	_		
		i			i									i i			İ				
]]							
-		1	-	_		_			_	_			_		_			_			
		ł																			
		j			1			ĺ]							
		ļ																			
		-																			
		ĺ			1																
		j			1			ĺ						1			1				
-		-	-	\vdash		_															
\vdash	<u> </u>	1	\vdash		1	_															
		j			1									j							
_		1	_	_	1	_		1					_	1 .	_		1		_		